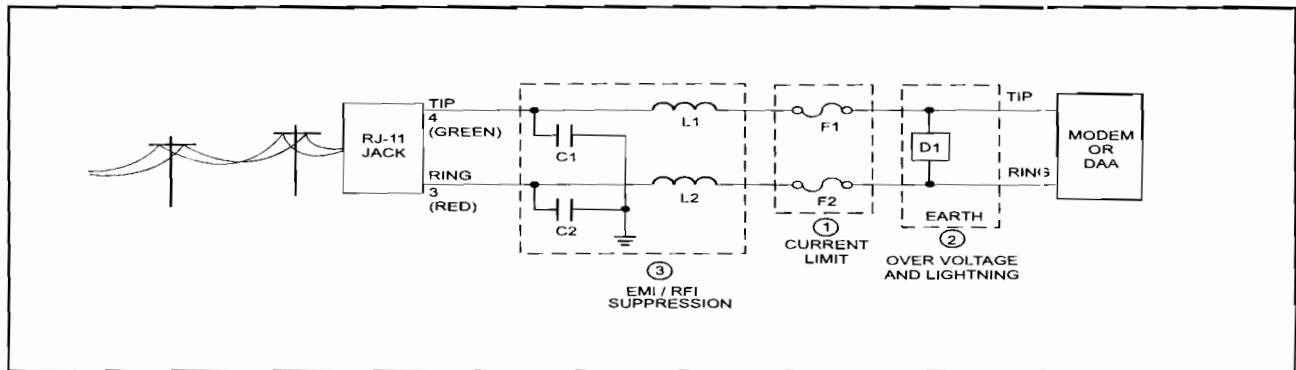


# **APPLICATION NOTE # 126**

## **Supplemental Telephone Line Protection**



### **1) Current Line Device F1 and F2 - 1.25 amp**

- A. UL 1459 must use a current limit device. A Raychem Polyfuse TR 600-150 is recommended, as this device resets automatically after each power cross. Acceptable devices are fuses from Little Fuse, type 251.250, or Cooper Ind. Bussman, type MCR 14.
- B. Resistors (10 ohm carbon film or SMD 1/8 w min) may be used for non UL applications.

### **2) Over Voltage and lightning Protection**

- A. The Device is provided with an internal sidactor device that protects from metallic voltage surges.
- B. DOC (Canada) may require current limit devices external to the module. Use 1 ohm resistors (carbon film or SMD parts 1/8 w min) in each lead (TIP and RING). You may also substitute fuses, or the Polyfuse described in Section 2.
- C. For lightning prone areas where there are more than two storms per year. Provide an earth ground connection and the following part - (this is FCC and DOC acceptable): Teccor (Tel: 214-580-1515) Sidactors P3203AB or P3100BA70. These devices give metallic and longitudinal protection for the modem. This must also include the current protection of Section 2.

### **3) EMI/RFI Suppression**

The capacitor/inductor network should be located as close to the RJ11 Jack as possible with excellent ground path to the chassis. Capacitors C1 and C2 should not exceed .005 mF. They must have a rating of 1.5 KV and typically are on .001 +/- 20%. Inductors L1 and L2 are Fair-Rite 2643666611 or 2943666661. These values are to be adjusted per the product design.